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Efficiency of electrochemical amination of anisole in aqueous-organic solutions of 4 M H 2SO 4

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Abstract

Cathodically initiated amination of anisole has been performed with the Ti(IV)-NH 2OH system in aqueous solutions of 4 M H2SO4 containing high concentration of acetic acid or acetonitrile. In electrolyses performed to reach full conversion of hydroxylamine, the isomeric anisidines obtained (2 para/ortho ~ 3.9) with total yields referred to the current and amino radical source exceeded 80%. © Pleiades Publishing, Ltd., 2012.

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Keywords

Amino cation radical, Cathode, Cation radical aromatic substitution, Hydroxylamine, Mediator system Ti(IV)/Ti(III)